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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCrory, Chief

MONTHLY NEWS LETTER

WASHINGTON, D. C., FEBRUARY 20, 1928.

.....
: TRANSFERS OF PROPERTY BETWEEN FIELD :
: MEN SHOULD ALWAYS BE COVERED BY MEMORANDUM :
: RECEIPT (FORM 146), AND A COPY SENT TO THE :
: WASHINGTON OFFICE. :
:.....

.....
: A DECISION HAS RECENTLY BEEN :
: RENDERED BY THE COMPTROLLER GENERAL TO THE :
: EFFECT THAT RECEIPTS MUST BE FURNISHED FOR :
: SUBSISTENCE PAID ON ACCOUNT OF OTHERS THAN :
: THE PAYEE HIMSELF. :
:.....

THE DIVISION IS CONSIDERING SECURING A SUITABLE FARM FOR THE PURPOSE OF CONDUCTING EXTENSIVE EXPERIMENTS IN THE MATTER OF TERRACING TO PREVENT EROSION. THE PURPOSE IS TO TAKE OVER A TRACT OF LAND THAT IS SUBJECT TO EROSION AND THAT PRESENTS SUITABLE VARIATIONS IN TOPOGRAPHY, AND SEE WHAT CAN BE DONE IN THE WAY OF BRINGING IT BACK INTO CONDITION. CROPS WOULD BE GROWN ON THE LAND AND CULTIVATED IN THE USUAL MANNER BUT AT THE SAME TIME TERRACES WOULD BE CONSTRUCTED AND ACCURATE RECORD KEPT OF EROSION AND RUN-OFF. THIS PROJECT WOULD CONTINUE FOR SEVERAL YEARS. L. A. JONES RECENTLY SPENT SEVERAL DAYS IN OKLAHOMA IN AN ATTEMPT TO LOCATE A SUITABLE TRACT OF LAND FOR THIS PURPOSE, THE PLAN BEING TO COOPERATE WITH THE FEDERAL FARM LOAN BOARD IN THIS CONNECTION. IF A SUITABLE FARM IS NOT FOUND IN OKLAHOMA THE POSSIBILITIES OF LOCATING IN THE SOUTH ATLANTIC STATES WILL BE INVESTIGATED.

SINCE THE LAST ISSUE OF THE NEWS LETTER THE FOLLOWING HAVE BEEN ADDED TO THE STAFF WORKING AT TOLEDO, OHIO, IN CONNECTION WITH THE PROJECT "MECHANICAL CONTROL OF THE CORN BORER"; OLIVER F. MORRETT, ASSISTANT AGRICULTURAL ENGINEER, REPORTED FEBRUARY 7; IRVIN F. REED, ASSISTANT AGRICULTURAL ENGINEER, REPORTED FEBRUARY 15. J. K. ALVIS, JUNIOR AGRICULTURAL ENGINEER RESIGNED JANUARY 31 TO TAKE UP OTHER WORK.

TWO IMPORTANT MEETINGS WILL BE HELD IN WASHINGTON FEBRUARY 28 - MARCH 1, INCLUSIVE. ON FEBRUARY 28 THE ADVISORY COUNCIL SET UP BY THE SECRETARY TO ASSIST IN CONNECTION WITH THE PROJECT RELATING TO FARM MECHANICAL EQUIPMENT RESEARCH WILL MEET HERE FOR THE PURPOSE OF RECEIVING AND CONSIDERING A REPORT PREPARED BY H. B. WALKER AND BASED ON HIS YEAR'S WORK WITH THE DEPARTMENT AS DIRECTOR OF THIS SURVEY. FEBRUARY 29 AND MARCH 1, THE ADVISORY COMMITTEE, COLLEGE DIVISION, A.S.A.E. WILL BE HERE FOR THEIR ANNUAL MEETING WHICH HAS BEEN HELD IN WASHINGTON REGULARLY FOR THE LAST 5 OR 6 YEARS.

D. G. MILLER ADDRESSED THE MINNESOTA SOCIETY OF ENGINEERS AT ST. PAUL, FEBRUARY 16, ON THE WORK HE IS DOING IN CONNECTION WITH THE DURABILITY OF TILE IN MINNESOTA.

W. V. HUKILL IS STILL IN THE FIELD IN CONNECTION WITH THE TRIP REPORTED IN THE LAST ISSUE. HE WILL MAKE AT LEAST ONE MORE TRIP FROM WASHINGTON STATE TO CHICAGO, ACCOMPANYING FRUIT SHIPMENTS TO SECURE DATA WITH REFERENCE TO PROTECTION AGAINST FROST.

C. E. RAMSER HAS RECENTLY PREPARED AND SUBMITTED FOR PUBLICATION IN ENGINEERING NEWS RECORD SOME VALUABLE DATA ON THE ROUGHNESS COEFFICIENT OF THE ST. FRANCIS RIVER FLOODWAY IN NORTHEAST ARKANSAS. THIS INFORMATION IS ESPECIALLY INTERESTING AND TIMELY IN VIEW OF THE PROPOSED MISSISSIPPI RIVER IMPROVEMENTS. MR. RAMSER FOUND THAT THE VALUE OF n FOR THE WOODED FLOODWAY RANGED FROM .088 AT A DEPTH OF 4.2 FEET, TO .152 AT A DEPTH OF 9.5 FEET.

D. L. YARNELL HAS COMPLETED RECONSTRUCTION OF APPARATUS FOR TESTS ON THE FLOW OF WATER AROUND BENDS AND HAS BEGUN MAKING TESTS. THESE TESTS ARE BEING MADE AT THE HYDRAULIC LABORATORY OF THE UNIVERSITY OF IOWA, IOWA CITY.

W. D. ELLISON IN STUDYING RECORDS OF THE FLOW OF WATER IN DRAINAGE DITCHES REPORTS LARGE VARIATIONS IN THE VALUE OF " n ". HE ALSO FINDS THAT THERE IS AN INCREASE IN RESISTANCE WHILE A SCOURING VELOCITY IS IN EFFECT BUT THAT AS SOON AS SAND BEGINS TO DEPOSIT THE RESISTANCE DECREASES.

ACCORDING TO B. S. CLAYTON, WHO IS CONDUCTING RUN-OFF INVESTIGATIONS IN MISSISSIPPI, THIS WINTER HAS BEEN THE DRIEST IN SEVERAL YEARS WITH THE RESULT THAT THERE IS LITTLE WATER IN THE DRAINAGE DITCHES.

G. R. BOYD HAS RETURNED FROM A TRIP TO THE PACIFIC COAST DURING WHICH HE VISITED THE BERKELEY OFFICE AND A NUMBER OF POINTS IN OREGON, WASHINGTON, IDAHO, AND MONTANA IN CLOSING UP THE PYROTOL WORK AND INVESTIGATING LAND CLEARING METHODS.

SHIPMENTS OF PYROTOL FOR THE MONTH OF JANUARY WERE AS FOLLOWS:

BARKSDALE	116,000 Lbs.
DUPONT	154,700 "
GIBBSTOWN	66,000 "

ONLY ONE CARTRIDGING PLANT (BARKSDALE, WIS.) IS NOW IN OPERATION, THE GIBBSTOWN PLANT HAVING FINISHED DECEMBER 28 AND THE DUPONT, WASHINGTON PLANT JANUARY 25. IT IS EXPECTED THAT SHIPMENTS FROM GIBBSTOWN WILL BE COMPLETED THIS MONTH AS WELL AS AGRICULTURAL SHIPMENTS FROM DUPONT. CARTRIDGING AT BARKSDALE WILL NOT BE COMPLETED UNTIL SOME TIME IN MARCH.

A. L. FELLOWS HAS PREPARED THE FOLLOWING NOTES REGARDING THE GREAT PLAINS REGION:

THE GREAT PLAINS REGION OF THE UNITED STATES, EXTENDING ROUGHLY FROM CANADA TO THE GULF OF MEXICO AND FROM THE 97TH MERIDIAN TO THE FOOTHILLS OF THE ROCKY MOUNTAINS, PRESENTS AGRICULTURAL PROBLEMS POSSIBLY MORE INVOLVED THAN DOES ANY OTHER SECTION OF THE COUNTRY. PRACTICALLY ALL COMBINATIONS OF SOILS, WATER SUPPLIES, AND OTHER CONDITIONS MUST BE TAKEN INTO CONSIDERATION. SO FAR AS HAS BEEN PRACTICABLE DATA RELATING TO THE PHYSIOGRAPHY, CLIMATIC CONDITIONS, SOILS, AGRICULTURE AND HUMAN ELEMENTS INVOLVED HAVE BEEN COLLECTED AND ARE NOW BEING COLLATED. CERTAIN CONCLUSIONS SEEM TO BE WARRANTED.

THE PHYSIOGRAPHY OF THE REGION IS GENERALLY FAVORABLE TO AGRICULTURE THAT SHOULD, IF EFFICIENTLY AND WISELY PLANNED, BE PROFITABLE. CLIMATIC CONDITIONS ARE GENERALLY CONDUCIVE TO MAKING THE DISTRICT RANK HIGH AS RESIDENCE TERRITORY. SECTIONS OF GREAT SIZE ARE BEST ADAPTED TO GRAZING ONLY WHILE OTHER PORTIONS OF THE REGION POSSESS CONDITIONS THAT MAKE POSSIBLE THE HIGHEST TYPES OF AGRICULTURE TO BE FOUND IN THE COUNTRY.

THE CENTER OF INDUSTRY AND OF POPULATION IS SHIFTING TOWARD THE CENTER OF THE COUNTRY, WHICH IS ALSO THE CENTER OF THE GREAT PLAINS REGION, AND AGRICULTURE IN THIS SECTION, FOLLOWING NATURAL LAWS, IS BECOMING MORE AND MORE INTENSIVE WHERE THIS IS POSSIBLE. IT IS BECOMING MORE AND MORE EVIDENT, BOTH THROUGH PRACTICE AND THEORETICALLY, THAT WHATEVER METHODS RESULT IN THE PRODUCTION OF THE GREATEST PROFITS IN AGRICULTURE ARE INEVITABLY THOSE THAT MUST EVENTUALLY BE ADOPTED FOR THE REGION GENERALLY. ALREADY IT HAS BEEN FOUND IN PRACTICE THAT FOR HUNDREDS OF THOUSANDS OF ACRES IN THIS REGION IT IS PROFITABLE TO IRRIGATE, AND THERE IS NO GOOD REASON TO DOUBT BUT THAT, EVENTUALLY, ALL

SUITABLE TRACTS HAVING ADEQUATE WATER SUPPLIES (WHICH, UNFORTUNATELY, ARE VERY LIMITED IN COMPARISON WITH THE ENTIRE AREA AND THE FUTURE NEEDS OF THE COUNTRY, BUT WHICH, NEVERTHELESS, AGGREGATE MILLIONS OF ACRES) WILL BE SO CULTIVATED.

MESSRS. PARSHALL AND ROHWER EXHIBITED THE NEW TYPE REGISTER FOR THE IMPROVED VENTURI FLUME AT THE DENVER STOCK SHOW AND FOUND IT TO OPERATE SUCCESSFULLY.

CARL ROHWER REPORTS THAT RESULTS OF TESTS TO DETERMINE THE RELATION BETWEEN INDICATED WIND VELOCITY AND THE GROUND WIND AT THE FORT COLLINS EVAPORATION TANKS, SHOW THAT THE WIND IS APPRECIABLY LESS AT THE GROUND SURFACE THAN AT AN ELEVATION OF 17 INCHES WHERE THE ANEMOMETERS ARE LOCATED. SIMILAR TESTS LAST YEAR SHOW THE SAME RESULT.

DURING THE LATTER PART OF JANUARY, A. T. MITCHELSON MADE A FIELD TRIP TO SOUTHERN CALIFORNIA AND SOUTHWESTERN NEVADA. HIS TRIP TO NEVADA WAS TO GO OVER THE COOPERATIVE WORK WITH THE OTHER REPRESENTATIVES OF THIS DIVISION ON COOPERATIVE WORK AT LAS VEGAS, PARTICULARLY IN ORDER TO RAPIDLY COMPLETE THE MUDDY VALLEY INVESTIGATION. HE ALSO REPRESENTED MR. McLAUGHLIN IN SOME MATTERS OF POLICY CONCERNING COOPERATION IN GENERAL IN NEVADA. IN SOUTHERN CALIFORNIA HE STUDIED IN MORE DETAIL THE METHODS AND EFFECTIVENESS OF UNDER-GROUND STORAGE OF FLOOD WATER HOPING TO GATHER ENOUGH DATA FOR A PROGRESS REPORT OR POSSIBLY A BULLETIN.

PAUL A. EWING SPENT ABOUT TWO WEEKS AT GRANTS PASS, OREGON, IN AN EXAMINATION OF THE AGRICULTURAL AND ECONOMIC CONDITIONS OF GRANTS PASS IRRIGATION DISTRICT, WHICH IS FACING THE NECESSITY OF READJUSTING ITS INDEBTEDNESS WITH THE EXPIRATION OF THE PERIOD DURING WHICH THE STATE GUARANTEED THE INTEREST ON ITS BONDS. LATER MR. McLAUGHLIN ALSO VISITED THE DISTRICT IN COMPANY WITH DR. W. L. POWERS, OF THE SOILS DEPARTMENT, OREGON AGRICULTURAL COLLEGE, WITH WHOM HE AND MR. EWING WILL COLLABORATE IN PREPARING A REPORT ON THE DISTRICT'S AFFAIRS FOR THE STATE RECLAMATION COMMISSION.

FRED C. SCOBAY HAS RECEIVED NOTICE OF ELECTION TO THE EXECUTIVE COMMITTEE OF THE IRRIGATION SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS. AS THE SOCIETY HAS ITS FALL MEETING IN SAN DIEGO THIS YEAR THERE IS OPPORTUNITY FOR A WELL ATTENDED SECTION MEETING OF THE IRRIGATION DIVISION.

IN ORDER TO BE ABLE TO LOCATE THE REMAINS OF THE MISSING, THE SEARCHING PARTY
WAS DIVIDED INTO TWO GROUPS. ONE GROUP WAS TO SEARCH THE MOUNTAIN SLOPES
AND THE OTHER WAS TO SEARCH THE VALLEYS. THE SEARCHING PARTY WAS
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